

# **Regulatory Impact Analysis of “Revisions to the Public Housing Operating Fund Program” (FR-4874-F-08)**

## **Executive Summary**

This final rule revises the regulations for the Public Housing Operating Fund program, which distributes operating subsidies to public housing agencies (PHAs). The underlying basis for these revisions is the recommendations of the Congressionally directed Public Housing Operating Cost Study conducted by the Harvard University Graduate School of Design. The regulatory changes in this rule reflect the recommendations made by a negotiated rulemaking committee on ways to improve and clarify the current regulations governing the Operating Fund Program, with some modifications to better reflect Administration policies and budgetary priorities.

More specifically, the rule attempts to achieve three objectives:

- Provide more explicit guidance on the expected outcomes contained in the operating subsidy formula;
- Streamline and simplify the operating subsidy calculation to:
  - Determine appropriate subsidy amounts for each PHA by project;
  - Distribute those amounts in a timely and accurate manner;
  - Use effective administrative control of funds;
  - Reduce reporting errors and facilitate more efficient and robust data collection;
- Improve the operating subsidy estimation process by placing more emphasis on actual or historical data rather than on forecasted information.

The purpose of this Regulatory Impact Analysis (RIA) is to discuss the economic impact of the implementation of the final rule. However, because this is a revision of an existing rule, this analysis focuses on the added benefits or losses resulting from the revisions to the current rule.

It was determined that the rule would be a major rule under E.O. 12866 because it results in transfers<sup>1</sup> of funding levels to and among PHAs of more than \$100 million a year. This analysis finds that the cost of the rule, assuming appropriations for the full formula amount when fully implemented, is approximately \$311 million in 2003 dollars in increased operating subsidy eligibility. The transition funding provisions, which are intended to provide a transition period for PHAs with subsidy changes, would result in varying costs over a five year period when compared to the fully phased in subsidy change, which would occur in year five of the rule implementation. The rule alters the flow of transfers to housing agencies and, as such, would have a direct financial consequence on the federal budget and on individual PHAs and their tenants.

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<sup>1</sup> The standard definition of a “transfer” in public economics is the provision of an economic benefit by a government to individuals in order to increase their welfare. A transfer could be monetary but many transfers are in-kind, such as housing assistance, Medicaid, food stamps, or public education. The word “transfer” is also used in this text to signify a redistribution of economic benefits from one group to another. For example, an increase in funds spent on public housing is effectively a transfer from taxpayers to program participants.

At the onset, the immediate consequences of the final rule are:

- Changes in operating subsidy allocations resulting from the rule would be phased in over two years for PHAs having subsidy eligibility increases and over five years for those with subsidy eligibility decreases; thus, the decreases and increases in Operating Fund eligibility and the change in distribution of funds will be less for those with increases the first two years and less for those with decreases until full implementation of the final rule in the fifth year.
- Using FY 2003 dollars and assuming discretionary appropriations for the full formula amount when fully implemented, the public housing program funding eligibility for operating subsidies would increase by approximately \$1.67 billion over the 5-year period compared to the existing formula.

### **Background on the Public Housing Operating Subsidy Program**

Under the Housing Act of 1937, as amended, Congress created the federal public housing program to assist communities in providing decent, safe, and sanitary dwellings for low-income families. It was not until 1975 that HUD established a permanent system known as the Performance Funding System (PFS) for subsidizing public housing. For most of the intervening period the public housing program was self-sufficient, because PHAs had the discretion to set rents high enough to cover all operating costs. The program began to move toward serving poorer households with the Housing Act of 1949, which required incomes of eligible households to be 20 percent below the income necessary to rent decent private housing. During the 1950s and 1960s the average income of public housing tenants began to fall as upwardly mobile households found affordable housing elsewhere. By 1969, public housing had increasingly come to serve the poorest households, who often had difficulty paying rents that were high enough to cover the full costs of public housing operations. As a result, Congress passed the Brooke Amendments, beginning in 1969, which limited the rent that tenants could be charged to 25 percent of their incomes and authorized a program of federal subsidies to pay for the operating costs that PHAs could no longer meet with rental income alone.

Rising subsidy levels during the mid-1970s resulted in concerns that the operating subsidies were being distributed without effective cost controls and that there was little incentive for good management. The Congress directed the Secretary of HUD to establish a formula mechanism for subsidizing the cost of providing public housing. As a result, HUD developed the PFS in 1975.<sup>2</sup>

### **Description of the PFS System**

The PFS consists of a number of technical components and decision rules for their use. Together, the decision rules and technical components determine the Allowable Expense Levels (AEL) of public housing agencies and the treatment of tenant income and other revenues. The technical components include the prototype cost equation, the inflation factor, the utilities

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<sup>2</sup> This background of Public Housing is from the General Accounting Office (GAO/RCED-99-210)

expense calculation, calculation of PHA income and occupancy rates, and the calculation of audits and other eligible costs. Two important decision rules determine the use of these cost and income calculations: the base year and the range test. The base year rule sets allowable expenses in the first year at a level equal to the PHA's approved budget, if the budget was within an acceptable range around the expenses estimated using the prototype cost equation. Twice over the program's life HUD has used quantitative cost models, based on two different sets of cost data, to better define subsidy levels: once at the outset of the PFS to establish an upper limit for allowable costs and again in 1992 to adjust some agencies' costs which, according to the second cost model, were less than 85 percent of their predicted levels.

Since its inception, PFS has come under constant review by HUD and others seeking to find a more effective mechanism for allocating Congressional appropriations to housing agencies. Critics of the PFS formula believe that it had conceptual design flaws and is outdated. For example, a large range of funding values was permitted in establishing the 1975 base year subsidy entitlements for otherwise similar PHAs. With some minor adjustments, the current system consists of the 1975 cost allowances that have been inflated annually with formula factors without consideration for changes in the management or operating environment that influence operating costs.

### **Negotiated Rulemaking Advisory Committee on the Operating Fund**

The Quality Housing and Work Responsibility Act of 1998 (Public Law 105-276, "QHWRA") called for the establishment of two new funds for public housing – a Capital Fund and an Operating Fund – that would replace, respectively, the Comprehensive Grant Program (CGP) and the Performance Funding System (PFS). Congress then directed HUD to initiate negotiated rulemaking with affected industry groups in order to determine how the monies from those funds would be distributed.

The Operating Fund Negotiated Rulemaking committee met in 1999. While the committee agreed on certain adjustments, it was unable to come to a resolution on a new formula, primarily due to a lack of data on what it should cost to run good quality public housing. As a result, the Conference Report (H.R. Rep. No. 106-379 at 91 (1999)) accompanying HUD's Fiscal Year (FY) 2000 Appropriations Act (Pub. L. 106-74, approved October 20, 1999) provided funds to conduct a study to determine the cost to operate well-run public housing and directed HUD to contract with Harvard University's Graduate School of Design for completion of that study. The study is known as the Public Housing Operating Cost Study (PHOCS). Congress further directed that HUD make the results of the Cost Study available to the negotiated rulemaking committee and appropriate Congressional committees.

A Negotiated Rulemaking Advisory Committee was reconvened to provide advice and recommendations on developing a rule for revising regulatory provisions of the Operating Fund Program based on the findings of the PHOCS. The advisory committee held four meetings to complete its work. Representatives from the following groups negotiated with the HUD delegation: the public housing industry (PHADA<sup>3</sup>, CLPHA<sup>4</sup>, NAHRO<sup>5</sup>, and NOAAH<sup>6</sup>), PHAs,

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<sup>3</sup> Public Housing Authorities Directors Association

<sup>4</sup> Council of Large Public Housing Authorities

tenant groups, the real estate and finance industry, and the Harvard Graduate School of Design staff who worked on the PHOCS.

### **Harvard Graduate School of Design Public Housing Operating Cost Study**

The Harvard Graduate School of Design (GSD) report on the cost of operating public housing was funded by Congress to provide the Negotiated Rulemaking Advisory Committee with estimates of needed operating expense levels as the basis for developing regulatory changes to the operating formula. The specific objectives of the Operating Cost Study were to determine appropriate operating costs for the 3,141 public housing authorities around the country.

Estimating individual operating cost needs for each PHA was not a straightforward task. First, examining the operating costs of properties is, in most cases, impossible because PHAs do not keep accounts at the property level. Second, examining operating costs of public housing authorities is not a good means of discovering the appropriate level of funding because housing authorities have few incentives to minimize the costs of providing housing. Lacking a profit incentive, PHAs will tend to spend whatever subsidies they are given. Researching the determinants of operating costs in the private sector, where the market imposes competitive pressures on producers of housing services, can yield insights on what constitute reasonable operating costs. The GSD utilized a database of FHA-insured rental properties that included a high proportion of HUD-assisted properties. The advantage of the FHA data is that the owners of the assisted properties are subject to similar regulations as are public housing authorities.<sup>7</sup>

The GSD ran a series of regressions to determine the factors that determine the operating costs of rental housing. Data on variables such as building characteristics (size, age, and type of structure), unit size, ownership type (non-profit, for profit, or limited dividend), characteristics of the clientele (percent assisted and whether family or senior), and location characteristics (neighborhood poverty rate and whether the project is within a central city) were available. A statistical model of operating costs was developed and tested.<sup>8</sup> The model and project-specific data inputs to the model were then used to generate estimates of what it would cost to operate each public housing project if it were subject to the discipline of the market.<sup>9</sup> The model was validated through extensive field-testing that compared actual and predicted project costs for a sample of projects in the case study with emphasis on projects with the largest differences between actual and predicted operating costs.

The final rule would implement the recommendation of the Harvard GSD report to replace the current subsidy factor known as the AEL factor with a new Project Expense Level (PEL). Each project within a PHA would have its own unique PEL which reflects the normal non-utility expense level necessary to adequately fund the non-utility operating expenses for public housing projects at levels comparable to those needed in the private sector to adequately maintain

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<sup>5</sup> National Association of Housing and Redevelopment Officials

<sup>6</sup> National Organization of African-Americans in Housing

<sup>7</sup> See Chapter 3 of the Cost Study for a description of the regulatory environment.

<sup>8</sup> The model produced an R-squared of 0.53 and the average confidence interval around model predictions is +/- 12 percent (see page 7 of the GSD Operating Cost Study for more).

<sup>9</sup> For a detailed discussion of the application of the model, see pages 17-20 of the GSD Operating Cost Study.

comparable projects. The detailed results of the study were published by the Harvard GSD and made available to the negotiated rulemaking committee.

### **Use of Data in the Final Rule and Data Quality**

The final rule provides a replacement for the PFS funding mechanism that is based on more current and objective data. In response to public comments received on the proposed rule, the final rule adapts all but two of the recommendations made by the negotiated rulemaking committee and made other minor changes to better conform to the committee's recommendations. The only two differences between the rulemaking committee's recommendations and the final rule are that the final rule retains use of the more localized data used for inflating PELs and it eliminates the \$2 per unit month "public entity fee" recommended by the committee because HUD did not believe it was justified by the research conducted by the Harvard GSD.

As discussed previously, PHOCS used a series of regressions on data from FHA-financed private-market rental housing to quantify the factors that determine the operating costs of rental housing. A log-linear regression model of operating costs was developed and tested. The parameters of the empirical model, in conjunction with data for each property, were then used to generate estimates to predict what it would cost to operate each public housing project if it were subject to the discipline of the market. The model was checked through extensive field-testing that examined a series of case studies.

Looking for data on which to base costs outside of the public housing program itself, the most logical choice would seem to be the operating costs of private market housing. Unfortunately, there is no comprehensive enough source of private cost data to form the basis for a subsidy allocation system for a nationwide housing program. Data collected by the Institute of Real Estate Managers (IREM) is not stable from year to year, cannot be identified with particular localities to a sufficient degree, and reflects operating expenses of apartments that differ a great deal from public housing in the characteristics of both the buildings and the tenants. Nonetheless, the magnitude of the difference between operating costs reflected in IREM and the FHA data and the operating costs of public housing lends credibility to the assertion that some PHAs are being given disproportionately high levels of operating funds under the current operating subsidy system.

While the PHOCS concluded that, given the lack of consensus as to what quality and level of housing and non-housing services should be included in estimating public housing funding needs, it was impossible to effectively determine how much it should cost to run public housing, It determined that it was possible to compare public housing to FHA-assisted properties. Public housing costs were benchmarked to FHA operating budgets based on 10 components using statistical techniques.<sup>10</sup> As noted, the final rule would implement the recommendation of the PHOCS to replace the current PHA-level Allowable Expense Level (AEL) factor with a new

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<sup>10</sup> According to the PHOCS, the FHA database had a number of advantages over other sources: The FHA database includes a comparable number of units (1.5 million FHA, 1.2 million public housing), in a similar number of projects, and serving similar residents.

Project Expense Level (PEL) for each project within the PHA. Under this system, a PHA's overall funding level is comprised of the sum of each of its respective projects' PELs.

### **Analysis of the Rule: Transition to Asset Management**

One of the major findings of the PHOCS is that HUD should require property-based accounting and management, as is the norm in private industry, rather than using an agency-management model when assessing the financial management of PHAs. Many PHAs do not currently maintain records at a project level, and can only provide summary agency-level information on expenses. Although PHAs are required to keep project-based accounts, loopholes have allowed them to avoid doing so.<sup>11</sup> A primary justification of this final rule is that the availability of detailed project level expense data is essential to effective PHA asset management. Many of even the most basic sound management practices used in the private sector cannot be used in the absence of project-level data, which in turn means that tenants' housing needs are not being met in the most efficient way. Without project level data, it is impossible to identify unusually high or low cost project expenditure components or to do a comparative analysis to identify unusual operating cost patterns. The absence of these data, in turn, makes it impossible for managers to determine how to allocate funds for individual properties and how to identify projects with unusually high operating cost components that require management intervention and correction. Project-level accounts will allow managers and auditors of PHAs to more accurately evaluate the appropriate strategies to improve the operation of individual projects as well as to allocate operating funds among projects. It will also facilitate decisions as to whether to abandon a failing project or, if not, how to effectively rescue it.

It could be argued that managers of PHAs who do not already collect financial and cost information on their properties will not effectively use this information. However, the collection of property level data is likely to affect PHA board and senior management decisions and will also enable HUD to re-orient the way it manages and evaluates a PHA's performance. Currently, HUD evaluates organizations and not properties. Having staff who track the performance of individual properties and information on the operating costs and conditions at those projects should lead to higher levels of performance with respect to the physical conditions of properties, occupancy status, and asset management. Collection of operating cost data will also greatly assist any new managers of PHAs to reform obsolete management practices, provide a wealth of data to independent auditors, and facilitate the eventual re-calculation of operating subsidy formulas.

It is difficult to estimate the economic impact of improved management of public housing that is likely to result from the change from centralized accounting to project-based accounting. Private market projects never centralize accounts as do PHAs, and centralization of accounting systems therefore was not one of the variables in the empirical model. In theory, the benefits would be measured by the market value of the increased quality and quantity of housing services derived from a more efficient use of funds. Even if these benefits were small as a proportion of the total costs of operation, a cost reduction of more than 2.9 percent<sup>12</sup> of the total operating subsidy

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<sup>11</sup> See page 85 of the PHOCS for a brief description of the loophole.

<sup>12</sup> The Public Housing Operating Funds was appropriated \$3.520 billion in FY 2003 so that \$100 million is 2.84 percent of that amount.

would be economically significant. Although the benefits of using project-level financial and cost data to manage properties are thought to be substantial, there are associated costs. Few PHAs maintain project-based accounting and budgeting systems and, for some, there may be significant costs to re-organizing data collection and accounting systems. Given that a large proportion of the costs of moving to a new system will be fixed, the smaller PHAs are likely to incur higher transition costs per unit than the large ones, although the final rule allows for agencies with 250 or fewer public housing units to elect not to follow the asset management model.<sup>13</sup> The accounting and data system costs, however, are likely to be secondary to the costs associated with the “culture” changes needed to effectively use the new information. PHAs will need to transition from an agency-centric to a property-centric management model. For instance, it may make sense to give project managers overall control over most project resources and to then hold them accountable for project performance using the data that will be available from project-based accounting and physical inspection systems.

### **Financial Impacts of the Final Rule**

The final rule would increase the overall funding eligibility for public housing operating subsidies and alter the flow of transfers. With exceptions as noted, the estimates provided in the text below are premised on full funding of the operating subsidy amounts PHAs are eligible for under the current and final funding systems. In practice, in recent years the Congress has not always fully funded operating subsidies. In the event that future levels of Congressional appropriations are kept constant or decreased, PHAs would be assigned their proportion of a fully funded formula program. The actual amount they receive would be based on whatever funding level is appropriated by the Congress. Thus, the relative impacts of each system would remain the same but the absolute dollars provided could change.

The budgetary impact estimates developed by HUD for discussion with the Negotiated Rule-Making Committee and as reported in this economic analysis were based on actual 2003 Calculation of Operating Subsidy data and 2003 Financial Statement data collected through the Financial Assessment Sub-system. A major component of the current and final rule and the Negotiated Rule-Making Committee’s recommendation are the expense level (allowable/project) and its related inflation factor. Each year under all methodologies a PHA’s current expense level is calculated by multiplying its prior year expense level by an inflation factor. The current and the final rule use the same inflation factor, while the Negotiated Rule-making Committee recommends an alternate inflation factor based on BLS data.

The regression model under the final and Negotiated Rule-making Committee creates a PEL in terms of an FY 2000 base year. Each of these PELs were inflated by their respective inflation factors to FY 2003. Under the final rule the PHA level inflation factors can be found in past published funding notices. The committee recommended inflation factor have been calculated for the years 2001 through 2003 and applied in accordance with their recommendation. Using this approach, HUD’s Office of Public and Indian Housing estimates that the implementation of the final rule would increase the net eligibility of PHAs for operating funds by about \$311 million (8.9%) by the end of the five-year transition period, from \$3.520

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<sup>13</sup> Alternatively, one could argue that because large PHAs probably have larger bureaucracies, they might be less flexible in adjusting.

billion to \$3.823 billion. In other words, if the final rule system had been fully funded in FY 2003 it would have cost \$311 million more in annual operating subsidies than a fully funded version of the current rule. In practice, the actual full phase-in cost may also be affected by inventory changes and differential inflationary impacts which could modestly increase or decrease this number.

### **Distribution of Increases and Decreases**

The PEL system affects both the overall formula level of Operating Fund subsidies and the distribution formula. For analysis purposes, full funding of \$3.823 billion in 2003 dollars is assumed. In the absence of full funding, the relative distributions would remain the same but the absolute level of subsidies provided would be reduced.

Three points should be noted with reference to both subsidy losses and gains resulting from the final rule. One is that they are expressed relative to the amount of operating subsidy currently received rather than compared to overall PHA budget levels. Thus, the percentage subsidy changes overstate the impacts on a PHA's overall budget, which also includes rental and other income. The second point is that the PEL system results in providing all PHAs a close approximation of what they would normally have to spend for operation and maintenance if they were operating an equivalent group of well-maintained private market projects. What the research behind the final rule shows is that the PHAs with the largest subsidy losses are those that have been the beneficiaries of inequities under the current rule. Such agencies will need to adjust their operating practices, but will have a transition period for doing so and should also be able to take advantage of the improved management practices available with project-based accounting. The third and major consideration is that all PHAs will have the income amount used in determining subsidy frozen and, unlike the current system that considers all PHA income sources (e.g., rental of non-dwelling space), only dwelling rental income will be counted in calculating subsidies (full subsidy entitlement = subsidy eligibility – dwelling rental income). The impact of freezing rental income for three years is difficult to predict, but it should prove to be a significant bonus to most PHAs.

### **Distribution of Decreases**

Table A-1 shows the list of PHAs that stand to lose the most from the implementation of the final rule. As it can be seen, 20 of the biggest decreases are in large, urban, predominantly Northeastern PHAs. These 20 PHAs collectively account for about 76 percent of the reduction in operating subsidy eligibility. The New York City Housing Authority would bear about 38 percent of the aggregate reductions and would lose 9.8 percent of its Operating Fund eligibility. The Alaska Housing Finance Agency stands to lose about 78 percent of its Operating Fund eligibility. Other PHAs that would lose a substantial share of their Operating Fund eligibility are: Rochester, NY (46%); Syracuse, NY (38%); Buffalo, NY (34%); and Las Vegas, NV (31%).

A number of additional large PHAs would have had substantial reduction in operating funds eligibility except for the protection allowed both under the negotiated rulemaking and this final rule for PHAs participating in the Moving To Work (MTW) program. Under the final rule,



PHAs participating in the MTW demonstration would continue to receive operating subsidy as provided in MTW Agreements executed prior to the effective date of the final rule.

**Table A-1: Largest PHA Decreases  
(Final Rule Eligibility With Full Funding -- 2003 Impacts with No Transition)**

<b>No.</b>	<b>PHA Name</b>	<b>Current Rule</b>	<b>Final Rule</b>	<b>Dollar Reduction</b>	<b>Percent Reduction</b>
1	New York City HA	\$759,219,776	\$684,653,335	-\$74,566,441	-9.8%
2	Cuyahoga	\$48,910,506	\$39,051,699	-\$9,858,807	-20.2%
3	Newark HA	\$42,599,296	\$33,607,797	-\$8,991,499	-21.1%
4	Baltimore HA	\$56,757,548	\$48,841,485	-\$7,916,063	-13.9%
5	Buffalo Municipal HA	\$18,792,648	\$12,427,305	-\$6,365,343	-33.9%
6	Alaska HFC	\$7,847,554	\$1,758,036	-\$6,089,518	-77.6%
7	San Francisco HA	\$27,956,818	\$24,242,998	-\$3,713,820	-13.3%
8	Rochester HA	\$8,084,487	\$4,391,091	-\$3,693,396	-45.7%
9	Syracuse HA	\$9,331,057	\$5,754,345	-\$3,576,712	-38.3%
10	Las Vegas HA	\$11,119,508	\$7,700,726	-\$3,418,782	-30.7%
11	Detroit HA	\$14,454,530	\$11,074,627	-\$3,379,903	-23.4%
12	Los Angeles City	\$28,089,260	\$24,968,299	-\$3,120,961	-11.1%
13	Allegheny County HA	\$11,593,810	\$9,243,065	-\$2,350,745	-20.3%
14	Albany HA	\$6,012,264	\$3,923,746	-\$2,088,518	-34.7%
15	Trenton HA	\$8,001,681	\$6,026,535	-\$1,975,146	-24.7%
16	Atlantic City HA	\$6,723,364	\$4,899,396	-\$1,823,968	-27.1%
17	Cincinnati Metropolitan	\$18,373,704	\$16,581,279	-\$1,792,425	-9.8%
18	Niagara Falls HA	\$3,343,648	\$1,556,798	-\$1,786,850	-53.4%
19	Birmingham HA	\$22,032,024	\$20,260,134	-\$1,771,890	-8.0%
20	Scranton Housing Authority	\$4,670,176	\$3,319,437	-\$1,350,739	-28.9%

### **Distribution of Increases**

Table A-2 shows the list of housing agencies with the largest percentage increases in operating subsidies assuming implementation of the final rule. Collectively, the 20 PHAs with the largest percentage subsidy increases would get 32 percent of the aggregate gross increase in operating eligibility. The Puerto Rico Housing Authority receives about 16 percent of the total increase, and its eligibility for Operating Funds increases by 82 percent. The Monroe Housing Authority in Louisiana would have a 269 percent increase in its eligibility for Operating Funds – increasing from \$983,395 to \$3,631,425, which is a level consistent with other similarly situated PHAs. Other housing agencies that would gain from the implementation of the final rule are: New Bedford, MA (95 percent); El Paso, TX (86 percent); Dallas, TX (68 percent); Hoboken, NJ (61 percent); and, Houston, TX (50 percent).

**Table A-2: Largest PHA Increases**  
**(Final Rule Eligibility With Full Funding -- 2003 Impacts with no Transition)**

<b>No.</b>	<b>PHA Name</b>	<b>Current Rule</b>	<b>Final Rule</b>	<b>Dollar Increase</b>	<b>Percent Increase</b>
1	Puerto Rico HA	\$100,750,573	\$183,232,141	\$82,481,568	81.9%
2	Atlanta HA	\$27,153,795	\$37,675,392	\$10,521,597	38.7%
3	El Paso HA	\$9,178,518	\$17,105,351	\$7,926,833	86.4%
4	Dallas HA	\$10,890,647	\$18,304,779	\$7,414,132	68.1%
5	Dade County HA	\$28,244,551	\$34,001,023	\$5,756,472	20.4%
6	Hawaii HA	\$10,807,097	\$15,866,934	\$5,059,837	46.8%
7	Hoboken HA	\$6,804,332	\$10,942,741	\$4,138,409	60.8%
8	Houston HA	\$7,958,297	\$11,913,679	\$3,955,382	49.7%
9	Charlotte HA	\$7,647,910	\$11,436,109	\$3,788,199	49.5%
10	Denver HA	\$8,826,018	\$12,553,761	\$3,727,743	42.2%
11	Boston HA	\$48,181,148	\$51,611,070	\$3,429,922	7.1%
12	DPAH Washington DC HA	\$44,528,978	\$47,920,445	\$3,391,467	7.6%
13	New Bedford HA	\$3,568,271	\$6,946,210	\$3,377,939	94.7%
14	New Orleans HA	\$29,194,654	\$32,262,859	\$3,068,205	10.5%
15	Monroe HA	\$983,395	\$3,631,425	\$2,648,030	269.3%
16	Jacksonville HA	\$6,173,060	\$8,721,566	\$2,548,506	41.3%
17	Augusta Housing Authority	\$5,977,185	\$8,513,112	\$2,535,927	42.4%
18	County of Cook Housing Authority	\$3,717,340	\$6,166,293	\$2,448,953	65.9%
19	Mobile Housing Board	\$12,919,826	\$15,248,538	\$2,328,712	18.0%
20	Metro Development HA	\$21,690,552	\$23,955,829	\$2,265,277	10.4%

### **Transition Funding**

The final rule would implement a transition policy aimed at assisting housing agencies' transition to the new funding levels as determined by the formula set forth in the final rule. The following table shows the budget impacts associated with the transition policy. For example, before transition, PHAs with decreases in subsidy as a result of the final rule would face a reduction of \$196 million in operating subsidy at one time. However, under the transition policy, these PHAs would have their reduction limited to 24 percent or \$47 million in year 1. Similarly, PHAs with increases in subsidy would receive an increase of \$507 million all at once. However, under the transition policy, these PHAs would have their increases limited to 50% or \$254 million in year 1.

**Table A-3: Transition Funding Levels**  
**Change from FY 2003 (millions of dollars)**  
(Changes due solely to impacts of transition funding policy)

	Year 1 Transition	Year 2 Transition	Year 3 Transition	Year 4 Transition	Year 5 Transition
Subsidy Reduction Limit	24%	43%	62%	81%	100%
Reduction Subtotal	(\$47)	(\$84)	(\$122)	(\$159)	(\$196)
Subsidy Increase Limit	50%	100%	NA	NA	NA
Increase Subtotal	\$254	\$507	\$507	\$507	\$507
Net Transition Funding Change	\$206	\$423	\$385	\$348	\$311

### Formula Income

In general terms, the Operating Fund pays for the difference between the PHA's operating expense and its income. The final PEL formula contains incentives for a PHA to increase its non-operating subsidy (i.e., primarily rental income) revenue. Only tenant rent is used in the formula, and even this figure will be frozen at 2004 levels for three years beginning in 2006. Therefore, any change in rental or other income does not increase or decrease a PHA's operating subsidy entitlement. Inflation is likely to produce at least some increases in PHA rental income during the three-year period during which it is frozen. In addition, it is likely that most PHAs will seek to increase their income streams, especially those PHAs that will have their Operating Fund reduced as a result of this final rule. Although this economic analysis does not attempt to quantify the impact of the policy to freeze incomes and maximize the incentive for a PHA to increase its non-operating subsidy revenue, it is likely that related actions will increase the funding available to most PHAs by at least modest amounts.

### Transfer Among Size Groups

PHAs with less than 500 units will gain approximately 34 percent of the increase in funding resulting from the implementation of the new formula. PHAs with more than 6,500 are the only group that do not have significant net gains from the new formula, and 92 percent of what gains this group receives goes to a single PHA, the Puerto Rico Housing Authority. It again should be noted however, that a number of large PHAs that would have had a reduction in funding will not have any decrease in operating subsidies because they participate in the "Moving To Work" program and the Negotiated Rulemaking Committee recommended that they should not be subject to the formula changes made under this rule. These PHAs will continue to have their operating subsidy calculated in accordance with their MTW agreements. Table A-4 summarizes the impact of the final rule based on a PHA size grouping. Table A-5 summarizes impacts in terms of the counts of PHAs in each size grouping category.

**Table A-4: Distribution by PHA Size – Dollar Amount****(Final Rule Eligibility with Full Funding -- 2003 Impacts with No Transition)**

<b>PHA Size Class</b>	<b>Gross Increase for PHAs Gaining Funds</b>	<b>Gross Decrease for PHAs Losing Funds</b>	<b>Net Change in Funds</b>
Less than 100 Units	\$25,968,254	(\$4,938,549)	\$21,029,705
100 - 249 Units	\$51,841,555	(\$9,223,034)	\$42,618,521
250 - 499 Units	\$96,739,032	(\$6,999,511)	\$89,739,521
500 - 1,249 Units	\$106,098,386	(\$12,537,281)	\$93,561,105
1,249 - 6,500 Units	\$117,348,845	(\$58,008,077)	\$59,340,768
More than 6,500 Units	\$109,076,791	(\$104,453,771)	\$4,623,021
Total	\$507,072,864	(\$196,160,224)	\$310,912,640

**Table A-5: Distribution by PHA Size – PHA Count****(Final Rule Eligibility with Full Funding -- 2003 Impacts with No Transition)**

<b>PHA Size Class</b>	<b>PHAs Gaining Funds</b>	<b>PHAs Losing Funds</b>	<b>PHAs with No Change in Funds</b>	<b>Total PHAs</b>
Less than 100 Units	1,151	351	2	1,504
100 - 249 Units	653	176	0	829
250 - 499 Units	380	49	0	429
500 - 1,249 Units	194	44	2	240
1,249 - 6,500 Units	79	42	4	125
More than 6,500 Units	7	5	2	14
Total	2,464	667	10	3,141

### **Gains in Efficiency**

The PHOCS and the rule share the expectation that the change in the distribution of funding under the final rule would result in efficiency gains and increase benefits to program participants and overall societal benefits. The redistribution of operating subsidy funds is expected to increase efficiency for two reasons. One is that the additional information made available with project-based accounting will lead to more efficient management of existing resources. The other reason for an expected efficiency increase relies on the assumption that there are diminishing marginal returns in the production of housing services as operating subsidy funds increase relative to a market-based operating cost baseline. Thus, PHAs receiving funding

increases will produce more housing services than will be lost at PHAs having funding decreases under the rule. No systematic study of the marginal returns to public housing operating subsidy has been made, however, and doing so is beyond the scope of this analysis. However, the outlines of such a study are provided below.

There are two approaches that could be used to measure the impacts of the funding changes. One is to measure objective changes in the maintenance and physical condition of public housing agencies gaining and losing funding, starting with the current period, and doing a follow-up no sooner than three or four years from now after funding levels have significantly changed. It should be noted, however, that past research has not found a strong correlation between quality of housing and maintenance expenditure levels.

An alternative approach is to compare resident satisfaction ex-post to current resident satisfaction, using the resident satisfaction indicator under the Public Housing Assessment System (PHAS).<sup>14</sup> Consider, for example, a public housing resident who receives utility from a consumer good,  $X$ , and the characteristics of housing:  $h_1, h_2, \dots, h_n$ . Characteristics of housing would include variables such as external building conditions; square feet per person; the quality of plumbing, heating, and electricity; amenities such as a garage or balcony; pest control; the quality of kitchen and laundry facilities. It is possible to summarize all of these characteristics by an indicator,  $H(h_1, h_2, \dots, h_n)$ , of housing quality. The indicator represents consumers' overall satisfaction with the housing unit, such that increasing the quality of one characteristic can offset the decrease in the quality of another. It is possible to estimate how housing quality varies with housing prices from American Housing Survey data, which include extensive characteristics of housing units as well as a rating of the consumers' satisfaction with the structure.

To understand the impact of the new formula on societal benefits, consider a simple example of two housing agencies: one that will gain from the introduction of the new formula and one that will lose. Suppose that the two agencies are identical in every aspect such that both would receive the same subsidy using the final formula. Given that the two public housing agencies are assumed to be identical, they will face the same cost function for providing housing quality. Thus, the new formula is likely to result in at least some equalization of funds spent to improve housing quality so that, by the end of transition, both PHAs have the potential to provide similar levels of quality. The relative change in quality provided will depend upon the size of the transfer and the cost function for producing housing quality, as well as budget allocation decisions made by each of the respective PHAs. The impact on consumers, however, depends on the utility they receive from housing quality.

The standard assumption in economic theory is that the increase in utility from the consumption of an additional unit of a good is not as great as the increase in utility from consumption of the previous incremental unit of that good (diminishing marginal utility). For example, using chocolate consumption as a metaphor for expenditures on housing quality, an individual would have a higher level of satisfaction with 10 (identical) chocolates a week than five. He or she would be happier with 20 than 15 chocolates a week, but the increase in happiness from 15 to 20 chocolates would not be as great as from five to 10 chocolates. The same reasoning would apply

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<sup>14</sup> The Public Housing Assessment System has a set of management indicators like its predecessor, the Public Housing Management Assessment Program (PHMAP) that is designed to measure the efficiency and management of housing authorities.

to components of housing quality, such as frequency of grounds and hall cleaning, just as much as it does to resident satisfaction.

Making the simplifying assumption that the marginal cost of producing additional housing services is constant, an equal transfer of funds would result in an equal transfer of quality. Due to diminishing marginal utility, the gain in utility of the resident of the winning PHA would be greater than the loss to the resident of the losing PHA. The relative increase would be even greater if the marginal cost of producing proportional quality improvements were increasing, as is generally likely.

Moving from this informal discussion to a framework for measuring the change in societal benefits would require substantial effort. One of the theoretical challenges is to define the mission of a PHA. While the Harvard Study estimated the costs that it would require to produce decent quality housing, many PHAs have undertaken additional duties, often with encouragement from HUD. For example, large PHAs are often responsible for security, infrastructure, and other public services. PHAs also often provide social services such as job training and support for child care programs. A reduction of subsidies may lead to a decrease in public services as well as housing services for some PHAs. Currently, PHAs spend collectively about 5 percent of their non-utilities operating funds for non-housing related services such as tenant and protective services. It is unclear, however, if this percentage will increase or decrease for the PHA community as a whole as a result of implementing the final rule.

Empirically, the challenge of a study that seeks to measure changes in PHA efficiency resulting from the funding changes proposed will be to translate the change in operating subsidies to a change in housing services. The Public Housing Assessment System data provide measures of tenant satisfaction as well as characteristics of the PHA. A first step towards estimating societal benefits of the subsidy redistribution would be to divide the PHAs into broad categories by funding changes from those that face a substantial decrease in operating subsidies to those that face a substantial increase. A multi-variate model of tenant satisfaction could then be developed with the proposed subsidy change as an independent variable. A major difficulty will relate to predicting how PHAs will respond to the rule because, as noted, PHAs have different cost functions and can make different choices.

In summary, even a rough measure of the gains in efficiency would require substantial theoretical and empirical research that is beyond the scope of this analysis. Given the increased focus the new approach will give to project-by-project performance and funding, it is highly likely there will be gains in efficiency, but a significant research effort would be required to accurately measure these gains.

## **Discussion of Alternatives.**

There are two obvious alternatives to the final rule. One is to leave the current system unchanged. Another option is to implement all of the recommendations of the Negotiated Rule-Making Committee.

## Committee Recommendations

Under a full eligibility funding scenario, the Committee's recommendations would result in a \$250 million or 5 percent increase in subsidy funding above the current formula level in FY 2006 (Year 1) and a \$435 million increase in FY 2011 (Year 5). Over a five-year period, full funding of the Committee's recommendations would require increased appropriations of \$2.1 billion.

Under a "constant budget" scenario, which assumes that appropriations for the Operating Fund remains at the FY 2003 level of \$3.520 billion and 100 percent eligibility, the Year 1 cost of the Committee's recommendations of \$250 million would result in a proration level of 93 percent.

The following table shows the distributional impact of the Committee's recommendations by PHA size category under a full funding scenario.

**Table A-6: Distributional Impacts of Committee's Recommendations  
by PHA Size  
(2003 Eligibility With Full Funding and No Transition)**

<b>PHA Size Class</b>	<b>Gross Increase for PHAs Gaining Funds</b>	<b>Gross Decrease for PHAs Losing Funds</b>	<b>Net Change in Funds</b>
<b>Less Than 100 Units</b>	\$27,469,089	(\$4,496,624)	\$22,972,465
<b>100 - 249 Units</b>	\$57,265,744	(\$7,911,970)	\$49,353,774
<b>250 - 499 Units</b>	\$105,530,893	(\$5,414,821)	\$100,116,072
<b>500 - 1,249 Units</b>	\$118,156,990	(\$10,000,409)	\$108,156,581
<b>1,249 - 6,500 Units</b>	\$135,389,476	(\$47,113,942)	\$88,275,534
<b>More Than 6,500 Units</b>	\$116,665,236	(\$50,522,994)	\$66,142,242
<b>Total</b>	<b>\$560,447,428</b>	<b>(\$125,460,760)</b>	<b>\$435,016,668</b>

## Final Rule

The final rule adopts nearly all of the Negotiated Rule-Making Committee's recommendations. A detailed summary of the few differences between the Committee's proposals and the final is provided in the preamble to the final rule. These differences are as follows:

1. No \$2 per unit month Public Entity Fee.
2. No change to PEL Inflation Factor. The Committee recommended that the inflation factor should be based on information published by the Department of Labor, Bureau of Labor Statistics (BLS).

Under the final rule, the full implementation cost of the rule in FY 2003 dollars, assuming appropriations for the total formula amount when fully implemented, would be \$311 million. This occurs, in part, because of the use of actual 2000-2003 inflation factors in calculating full FY 2003 funding eligibility amounts under the two systems. The distributional impacts are shown in Table A-4.